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Governor

GARY R. HERBERT
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State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

October 24, 2006

Niles Veal
Twin Mountain Rock Company- Rinker Materials
P.O. Box 1009
Sheridan, Wyoming 82801

Subject: Initial Review of Notice of Intention to Amend Large Mining Operations, Twin Mountain Rock, Milford Quarry, M/001/036, Task ID# 1440, Beaver County, Utah

Dear Mr. Veal:

The Division has completed our review of your draft Notice of Intention to Amend Large Mining Operations for the Milford Quarry, located in Beaver County, Utah, which was received June 7, 2006. After reviewing the information, the Division has determined that the notice meets the qualifications to be considered an amendment, rather than a revision. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion and **address only those items requested in the attached technical review** by sending replacement pages of the original mining notice **using redline and strikeout text**. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records. Please provide a response to this review by September 20, 2005.

The Division will suspend further review of the Milford Quarry amended Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me, or Tom Munson of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

Susan M. White

Susan White
Permit Supervisor
Minerals Regulatory Program

SW:tm:pb
Attachment: Review
cc: Ed Ginuvous, BLM, Cedar City
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REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Twin Mountain Rock
Milford Quarry
M/001/036
October 24, 2006

R647-4-101 - Filing Requirements and Review Procedures

R647-4-104 – Operator's, Surface and Mineral Ownership

R647-4-105 - Maps, Drawings & Photographs

105.1 Topographic base map, boundaries, pre-act disturbance
Either the map scale or the bar scale on maps 1B and 4A are incorrect.
Please make the changes to correct this inconsistency. (DJ)

The maps included in the application needs to show the elevations on contour lines. (DJ)

105.2 Surface facilities map
There does not appear to be a culvert where the drainage control ditch, that circles around the northern portion of the stockpile area, crosses the rail spur and maintenance road.
Is there a culvert where this ditch crosses the rail spur, if so please show the location. (DJ)

Exhibit 10C-Sheet 1indicates that the pit floor will not be ripped before revegetation.
In order to remove compaction and attain maximum water harvest for revegetation success this area should be deep ripped prior to seeding. (DJ)

Exhibit 10C-Sheet 1 shows that the fines pile area will not receive any reclamation treatments. But the plan states that the fines pile will be regraded to a 4:1 slope and revegetated.
The Exhibit should reflect activities stated in the text. Before this area is revegetated it should be deep-ripped to remove compaction and for water retention. (DJ)

R647-4-106 - Operation Plan

The words Confidential Page 2 5/18/2006 has been inserted twice into the operation plan narrative.
What portion of this narrative was to be considered confidential? (DJ)

106.2 Type of operations conducted, mining method, processing etc.
The plan states that Utah Power & Light will be responsible for the construction and maintenance of the power line within the site.
Who will be responsible for the removal of this item? If Twin Mtn will be responsible, please include this cost in the surety estimate. The EA requires that the power line and transformers be removed unless another party requests that it be left. (DJ)
The plan includes a list of the equipment to be located at the site.
The surety should include a line item for the removal of all of this equipment. (DJ)

106.3 Estimated acreages disturbed, reclaimed, annually.
The submittal indicates that a 1.61 acre area at the riprap pit has been removed from the disturbed area total for the site.
Until this area has been reclaimed and released, it will need to remain a part of the total acreage and reclamation surety. (DJ)

106.4 Nature of materials mined, waste and estimated tonnages
The plan indicates that 1.3 million tons of fines material will be permanently stored outside the pit.
The EIS for the pit states that the overburden will be moved back into the pit. Is the placement of this material outside the pit a change to this statement? (DJ)

The submittal indicates that the reject pile will be graded to blend with the surrounding topography.
The plan states that the fines pile will be regraded to a 4:1 slope. Please make changes to the plan to reflect this change. (DJ)

106.5 Existing soil types, location, amount.
The plan indicates that a total of 360,234cy of soils is available at the site.
Map 6B shows that at the present time only ~61,000cy of soil presently stockpiled. Will there be additional piles of soil placed around the site? If so where will these piles be located and will they cause additional areas at the site to be affected? (DJ)

The map in Appendix 2-1 is very difficult to read. Is a better copy available? Could the permit boundary be sketched on this map? (PBB)

The last sentence in Appendix 2-2 is incomplete, so it appears there should be at least one more page in this appendix. Please provide this information. (PBB)

Have soils within the depth range of about one to two feet been tested for salt content (electrical conductivity)? If so, please provide this information, but if not, this test should be performed on a few samples taken from a depth of 12-18 inches. Problems are most likely in the soils in the processing area. The reason for needing this information is to ensure that soils with high salt content are not salvaged. The plan indicates that soils with very high pH readings occur below about two feet, and there could also be a zone of salt accumulation. (PBB)

Exhibit 6B shows a subsoil pile. Has this material been tested? From how deep in the soil horizon did it come? (PBB)

106.6 Plan for protecting & redepositing soils
Page 18 includes a table showing available topsoil, but the total acreage shown, 165 acres, is less than that shown elsewhere in the plan, such as Exhibit 10-C and the table on page 15. Please explain the difference or provide new acreage and, potentially, topsoil volume figures. (PBB)

The plan indicates on page 18 that about 360,000 cubic yards of soil was available to be stripped from 165 acres, but page 34 says about 71,000 yards has been salvaged with an additional 20,231 yards still available. Why is there such a substantial difference between what was available and what was salvaged? (PBB)

Please include a commitment to seed the soil stockpiles. Vegetation on the stockpiles should be monitored, and it may be necessary to re-prepare the surfaces and to reseed. (PBB)

Will soils and fines be distributed evenly over the entire site, or will some areas receive more soil or fines than others? The Division calculates that there would be an average of about 3.5 inches of soil to place over the entire site. (PBB)

The plan to use fines as a substitute soil is acceptable, but the fines need to be used as subsoil rather than topsoil. The salvaged soil should be placed over the fines. Please includes this commitment in the plan. Even a very thin layer of soil over waste tends to improve revegetation success compared with situations where waste is on the surface. (PBB)

Please describe how soil materials will be transported to the pit faces and spread. (PBB)

106.8 Depth to groundwater, extent of overburden, geology
The plan states that there are no wells in the area of the mine.
Exhibit 6B and portions of the plan indicates that a well presently exists on the property.
Please correct this statement in the plan and state the water level in the well and what formation the well produces water from. (DJ+TM)

106.9 Location & size of ore, waste, tailings, ponds
The plan states that the ponds, located at the processing plant, will be lined.
Please state what the ponds will be lined with and include a line item in the surety for the removal and disposal of these liners, if necessary. (DJ+TM)

R647-4-107 - Operation Practices

107.1 Public safety & welfare

107.1.15 Constructing berms, fences, etc. above highwalls
The plan does not mention the existence of a berm above the highwall of the pit and none of the maps reflect this feature.
If the berms do not exist at this time it should be constructed for public safety purposes. A line item should be included in the surety estimate to reflect the construction of the berm after recontouring is completed. (DJ)

The plan states that public access is controlled by gates and fences shown on Exhibit 6B.
No fences or gates are shown on Exhibit 6B. Please show the location of these features on this Exhibit and include the cost for removal in the surety estimate. (DJ)

107.3 Erosion control & sediment control

The "Disturbed Water Ditches" shown on Exhibits 6B and 12 are not the same. Please review these locations and correct the inconsistencies. The original plan used detailed hydrology calculations to determine ditch sizes and storm water flows. The amendment does not seamlessly dove tail into the previous drainage calculations and changes to the amended hydrology plan are not clear from a drainage perspective and need to be updated to either reflect the old plan and create a new consolidated plan.
It is acceptable to use alternative sediment control in the expansion of the plant area and mine drainage, but the operational hydrology and reclamation drainage plan needs to better describe what is occurring on the ground. If Rinker wants to revamp the drainage plan to reflect the on the ground hydrology, this can be done. First, and foremost the plan needs to describe stormwater runoff exactly what has historically occurred at the site and will occur at the site at the site in the future. Being a arid climatic regime, the runoff most likely occurs as runoff from rainfall events that occur in the summer(great intensity and short duration), therefore the ability to slow down runoff and control it through the use of slope breaks, check dams and small sediment ponds etc. is very appropriate given that none the runoff feeds a perennial water course and is totally ephemeral in nature and infiltrates into the ground. The problem is that the current plan lacks the necessary detail to describe how alternative controls will work for reclamation.

If all the culverts will be removed and the final drainage requires alternative sediment control, please show the location of these controls on Exhibit 10 C and provide a generalized drawing and description of these controls. The location of any rock check dams etc. can to be shown on Exhibit 10 C. The use of these sorts of alternative sediment and erosion controls are considered appropriate and can answer the geomorphic considerations relating to slope breaks and rough surfaces which all contribute to the lack of erosion and channel down cutting during major storms.(DJ+TM)

In Appendix 4A describes the Rip Rap Pit as having 13.5 acres of disturbance.
The operations plan for the Rip Rap pit disturbance as 12.67 acres. Which figure is correct? (DJ)

The plan states that final drainage pattern is shown on Exhibit 10C-Sheet 1
There is no drainage pattern shown on this exhibit. (DJ+TM)

107.5 Suitable soils removed & stored

The plan states that 70,928 cy of soil has been harvested to date.
Exhibit 6B topsoil locations only indicate the existence of 61,149 cy. Where is the rest of the soils being stored? (DJ)

R647-4-109 - Impact Assessment

109.1 Impacts to surface & groundwater systems

Please include a site specific climate and runoff discussion in this section to support the alternative erosion and sediment control plans. (TM)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
The plan states that prior to construction of the rail line and access road, the soil will be stripped and stockpiles. Upon completion of mining the rail line will be removed and reclaimed.
The access/maintenance road along the rail line also needs to be reclaimed at this time. The cost of this additional activity should be included in the surety estimate. (DJ)

Because of the length of time that this soil will be stockpiled before it is used to reclaim, temporary seeding of this stockpile should take place before weeds become established. (DJ)

Exhibit 10C-Sheet 1 indicates the final reclaimed slopes in the ballast pit with vary between 1.1:1 to 1.2:1.
The BLM EA for the site states that the final slopes will be no greater than 3:1. Has the BLM agreed to the steeper slopes in this area? (DJ)

The EA states that there will be no water impoundments in the pit.
Will fines be placed on the pit floor to bring this area back to surrounding surface elevation to assure that an impoundment of water in this area does not happen? (DJ)

On Exhibit 10C-Sheet 2 the outslope of the undersize dump at the Rip Rap is shown at ~1:1 slope.
The face of this dump should be regraded to a minimum slope of 3:1. (DJ)

110.5 Revegetation planting program
The plan states that topsoil will be placed on 171.3 acres. Exhibit 10C-Sheet 1 indicates that 187.9 acres will be retopsoiled and revegetated.
Please explain the differences between these two figures. (DJ)

Exhibit 10C-Sheet 2 indicates that the area of the Rip Rap pit will be regraded.
The area needs to show that the area will be regraded, deep ripped and revegetated as indicated in the text of the plan. (DJ)

R647-4-111 - Reclamation Practices

111.2 Reclamation of natural channels
Please see the discussion under operation section Rule 107.3.(TM)

111.3 Erosion & sediment control
Please see the discussion under operation section Rule 107.3.(TM)

111.9 Dams & impoundments left self draining & stable
This needs to be discussed in terms of the alluvial nature of the soils and the lack of ponding or impoundment of any water.(TM)

111.12 Topsoil redistribution
The plan indicates that soils will be spread by a combination of dozers, blades, front-end loaders & trucks.
The surety estimate calculated for the site does not include any front-end loader and truck time and does not indicate that these pieces of equipment were mobilized. Please show in the estimate where these pieces of equipment will be used. (DJ)

111.13 Revegetation

The Division recommends including fourwing saltbush (*Atriplex canescens*) in the seed mix at a rate of 2.0 pounds of pure live seed/acre. (PBB)

The plan includes options to drill or broadcast the seed except that winterfat would be broadcast seeded. Sandberg bluegrass, Wyoming big sage, and forage kochia should also be broadcast seeded. Lewis flax, Palmer penstemon, and scarlet globemallow should only be drilled if they can be planted less than one-half inch deep; otherwise they should be broadcast seeded. Please make the appropriate changes to the plan. (PBB)

The Division recommends against using any fertilizer, but if it is to be used at a low rate as discussed in the plan, application needs to wait until plants are well established and rain or snowfall is anticipated. (PBB)

R647-4-112 - Variance

The operator requests a variance from the requirement to spread topsoil on 16.6 acres of sidewalls and benches with slopes of 1.2:1, but the plan does not contain adequate justification for granting this variance. Additionally, this variance request conflicts with Exhibit 10C Sheet 1 which shows the entire pit being topsoiled and revegetated. (PBB)

The backfilling and grading plan discusses grading the pit slopes, including slopes as steep as 1:1. If these slopes are to be graded, there does not seem to be any reason topsoil cannot be spread there. (PBB)

A variance request must show what alternate methods or measures will be utilized, and a variance will be granted if the alternative method or measure proposed will be consistent with the Act. For the Division to grant the requested variance, the plan needs to show what alternative methods will be used. Otherwise, the variance request should be removed from the plan. (PBB)

R647-4-113 – Surety

The costs for the equipment used in the reclamation needs to be adjusted.
The costs should read as follows:

Equipment	Hourly Rental-(includes fuel & maintenance)
Cat D9R	$301.80
Cat D10R	$395.70
Cat 623	$373.00
Cat 140H	$ 97.80
Water Truck	$ 84.95
Mechanic Truck	$ 40.70
Fuel/lube Truck	$ 57.40
Flatbed Truck	$ 58.40
Tandem Axle Truck Crane	$160.65
Pick-up (3/4 ton 4X4)	$ 13.64
Farm Tractor	$ 68.10

(The Division questions the use of a truck crane for dismantling the plant area because of the limited lifting capacity. A heavier rough terrain crane is recommended.)

The Mob/Demob costs reflect the cost of mobilizing equipment out of St George. As far as the Division is presently aware the D9R, D10R, 623 scrapers, and 140H blade will probably need to be mobilized out of Salt Lake City.

(The Division questions the surety only showing the mobilization of one Cat 623 scraper. With approximately 400,000 of soil to be moved during reclamation, the time need for this scraper to move even a portion of this soil seems excessive. A fleet of scrapers should be considered.
The use of a loader and trucks are mentioned in the plan but are not reflected in the surety calculation or in the Mob/Demob costs.
The production rate for the D10R dozer notes a push distance of only 30 feet. In reviewing Exhibit 10C-Sheet 1 the distance the material will need to be moved is greater than 30 feet. Please show how this push distance was arrived at.

Seed Costs Drill seeding $240/acre Broadcast Seeding $280/acre (Division costs)
Fertilizer costs $100/acre
(The surety estimate includes a cost for discing, the Division recommends deep ripping of the areas prior to seeding)

Labor Costs

Heavy Equipment Operator	$36.70/hr
Mechanic	$36.70/hr
Truck Driver	$27.60/hr
Laborer	$27.40/hr

(Equipment and Labor costs from Data Quest Blue Book)

Dismantle Facilities

Track removal Spurline	$7.07/lf
Ballast removal Spurline	$$3.24/lf
Office Demolition	$0.22/cf
Shop Demolition	$0.17/cf
Concrete (shop floor)	$7.87/sf
Shop Footings	$11.79/lf
Concrete	$4.89/cy

(Costs from Means Heavy Construction Cost Data)

Costs shown in the surety estimate utilizing these costs should be recalculated.

The demolition or removal of the following should be included in the surety estimate.

Removal of the water tank
Closure and plugging of the well
Removal of the fuel tank farm.
Removal of prill silo
Removal of all components in the processing area.
Removal of the culverts
Cost of reclaiming a percentage of the piles located at the processing plant.
Cost of the recontouring and revegetation of the maintenance road that runs along the rail spur.
Cost of Soil Analysis
Cost of placing contour ditches after pits are recontoured.